P110 Evaluation of the Nutritional Content of Foods Distributed to Clients at a Model Rural Food Pantry: A Pilot

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Background (Background, Rationale, Prior Research, and/or Theory): Many low-income residents of rural areas frequently experience food insecurity, and patronize food pantries for food assistance. Many also live with chronic diseases, making the quality and nutritional content of the foods received important. However, the nutritional quality of foods available in pantries, depend on funds and possibly nutrition literacy of the providers.

Objective: Evaluate the quality and nutritional content of foods distributed at a model rural food pantry.

Study Design, Setting, Participants, Intervention: A cross-sectional study involving a private food pantry with two distribution days/month (a day for self-reported diabetics and another for all other registered members) in rural North Carolina. The pantry serves over 200 clients/month, with more than 60% of patrons being >50 years, female, and African Americans.

Outcome Measures and Analysis: We analyzed nutrition contents of boxes per distribution days at two time periods (4 days total). The foods were grouped according to Dietary Guidelines for Americans (DGA) and MyPlate; foods nutrient content were compared with the Recommended Dietary Allowances (RDA).

Results: The pantry consistently provided foods from all food groups, except the “Dairy” group. Based on a 2,000 calories diet, content of food box distributed each time will last ≈6–13 days. Foods were mostly (≈70%) canned/prepackaged and ready-to-eat, few (≈5%) were frozen. Low-sodium and low-fat items were also available. Based on recommended daily servings, food boxes contained “Grains” to last 2–30 days, “Protein” ≈ 6 days, “Fruits” 9–12 days, “Vegetables” and “Dairy” ≈ 8 days. Fiber, potassium, calcium, vitamins A and C of the provided foods were below the % Daily Values when compared to RDA.

Conclusions and Implications: The model pantry provided variety of foods per DGA. However, the boxes are distributed once a month with limited servings for proteins, vegetables and dairy. Education on procurement and distribution of nutrient-dense foods is warranted. Future research will engage this pantry in adopting and testing the Choose Healthy Options Program (CHOP) procurement model to improve the nutritional quality of foods distributed to its patrons.

Funding: East Carolina University.

P111 Examining WIC Farmers Market Nutrition Program Voucher Redemption in New Jersey

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Background (Background, Rationale, Prior Research, and/or Theory): The Women, Infants, and Children (WIC) Farmers’ Market Nutrition Program (FMNP) provides eligible recipients with vouchers to purchase fruit and vegetables directly from farmers. In New Jersey (NJ), redemption rates have been relatively low.

Objective: The objectives of this study are to: determine FMNP redemption rates at different WIC clinics and among demographic groups; identify barriers to redemption; and analyze other differences in redemption based on food procurement and consumption practices.

Study Design, Setting, Participants, Intervention: Five hundred and nine in-person surveys were conducted at two WIC clinics in northern NJ. One clinic was served by a weekly farm stand, and the other was served by a local farmer who stocked an on-site refrigerator with bags of produce.

Outcome Measures and Analysis: FMNP redemption rates, barriers to voucher redemption, and fruit/vegetable consumption and procurement patterns were analyzed using descriptive statistics and independent t-tests.

Results: Of the survey respondents, 65.42% indicated receiving FMNP vouchers in 2017. Redemption rates differed at WIC clinics: the site offering an on-site refrigerator with produce had a rate of 70.77%, but the site with the weekly farm stand had a rate of 61.32% ($P = .033$). At the latter location, self-reported servings of vegetables eaten daily on average were significantly higher among FMNP redeemers than non-redeemers (2.78 vs. 1.92; $P < .036$). The most significant barriers to redemption were that the closest farmers’ market was not open at convenient times and/or was located too far away.

Conclusions and Implications: Additional efforts to make FMNP voucher redemption more convenient in low-income communities are necessary to ensure an increased redemption rate.

Funding: USDA.

P112 Grocery Store Survival in Underserved Places: Some Lessons for Consumers and Nutrition Educators

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Background (Background, Rationale, Prior Research, and/or Theory): Availability of healthier foods through full-service grocery stores contribute to dietary choice and risk of related chronic diseases. However, evidence is not strong that simply bringing new supermarkets to underserved neighborhoods improves food purchasing, consumption, and health outcomes of local consumers.

Objective: The purpose was to identify concerns facing existing grocery stores operating outside mainstream retail food locales in making food available to low-income households within a changing global food retail environment.

Study Design, Setting, Participants, Intervention: We conducted a qualitative study using research methods based on grounded theory at three research sites representing rural, village, and inner city communities in upstate New York. A naturalistic approach was used to understand the experience of running a grocery business from the perspective of grocers living and working in underserved locations. The social-ecological model framed the project. Three organizational models were examined: chain stores, franchises, and independently-owned operations. Fourteen retail owners and managers, with 28 of their customers, were recruited using purposive and theoretical sampling and then interviewed.

Outcome Measures and Analysis: The constant comparative method and periodic peer debriefings led to focusing on organizational structures and locations. Analysis included coding, diagramming and matrix construction.

Results: Grocers reported these concerns influencing ability to run their business: consumer demand, product management (access to wholesale distribution channels), employee and labor relations, local and global competition, access to capital, government relations at all levels. Meaningful differences were found between chain and non-chain stores in their ability to perform economic functions versus social functions important to underserved neighborhoods.

Conclusions and Implications: Two grocery store operator management typologies emerged, one more capable of meeting community economic needs, the other more attuned to social needs. These appear related to chain vs. non-chain store structure. By familiarizing themselves with what grocers need in order to stay in business, those advocating for retail food availability in underserved areas can better support existing stores.

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P113 Looking Through Asian Lenses: Perceptions Toward U.S. Food and the Food Environment

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Background (Background, Rationale, Prior Research, and/or Theory): Asian international students number about 449,714 in the U.S. Their poor eating habits and increased health risks have been described. However, their perceptions, how they navigate a new food environment, and how these are connected to their food consumption have not been explored.

Objective: To examine how Asian international students perceive U.S. food and the food environment.

Study Design, Setting, Participants, Intervention: A cross-sectional design using an online survey administered to East Asian international students ($n = 511$; female 67.1%; mean age 24.8 years;) at two public and two private universities in New York state.

Outcome Measures and Analysis: A 13-item perception questionnaire using a 5-point Likert scale and a food frequency questionnaire. Descriptive statistics were used to describe the perceptions toward U.S. food and the food environment. Multiple regression analysis was performed to analyze how perceptions were related to demographic factors and current food consumption. Content analysis with NVivo software was used to analyze the qualitative part of the survey.

Results: Students tended to agree that much food is being wasted, portions in restaurants and stores are large, and advertisements and marketing of fast food and processed food are ubiquitous. They disagreed that the price of food is cheap, and that meals in restaurants are well balanced. When they stayed longer in the U.S. ($B = .042$, $P = .05$) and became more acculturated ($B = .205$, $P = .000$), their perceptions toward the food environment became more positive regarding quality, variety, availability, safety, and price of food. When they had positive perceptions toward the food environment regarding these features of food, they increased their whole food consumption ($B = .197$; $P = .000$). Content analysis showed that students often mentioned that there were differences in food culture (29%) and U.S. food system factors (27.6%).

Conclusions and Implications: Nutrition education should involve helping students understand and successfully navigate the U.S. food environment so they can make healthier food choices while they stay here.

Funding: None.

P114 Perceptions of Childhood Obesity are Related to Food and Beverages Served in Head Start Programs: An Examination of Current Practices Across North Carolina

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